

II. REMARKS

All the claims, including claims 1 – 5 and 9 – 11, have been rejected as obvious based on United States Patent Number 5,459,980 (Kenney) in view of United States Publication Number US2002/0157355 (“Tampieri”) and United States Patent Number 5,001,880 (“Smith”). Claims 6, 12, 15, 17 – 27, and 29 – 32 have been rejected as obvious based on Kenney in view of United States Patent Number 5,752,365 (“Johnson”). Claim 7 has been rejected as obvious based on Kenney in view of United States Patent Number 3,684,614 (“Lemelson”). Claim 8 has been rejected as obvious based on Kenney in view of Johnson. Applicant requests reconsideration of the pending rejections and favorable examination.

Amendments to the Claims

Applicant amends claims 1, 10, 11, to make it clear that the “first sheet” is the “bottom” one and that the “second sheet” is both the “upper” on and “a film.” Claim 15 is amended to require that the “upper sheet” is a “film”. The requirement that “the upper sheet end portions and portions of the lower sheet forming the end seals are folded upwardly, whereby rigidity of the package is enhanced” is deleted from claims 15 and 26 in favor of reciting the requirement in dependent claims.

The Cited Art Does Not Disclose An Upper Sheet That Is Preshaped and a Film

Applicant’s claims 1, 10, 11, and 15 require that it is the “upper sheet” that is preformed. Moreover, Applicant’s claimed “upper sheet” is a “film. Claim 26 requires “a relatively flexible foil or film shaped to fit at least partially around the products.” Tampieri is cited for disclosing “packaging in which a film (1) is fed to a forming station (6) at which time it is pre-shaped to fit products, which are inserted at a later point.”

Tampieri when considered as a whole discloses placing products in it’s *lower* pre-shaped blisters before being sealed by an upper sheet. Further, Tampieri’s pre-shaping is permanent such that a rigid structure is formed. The pre-shaped sheet (to the extent the blister pack of

Tampieri constitutes a pre-shaped sheet) is the lower sheet, which would rest on the supporting drums and require special adaptation of the transport equipment to support the moving pre-shaped sheet without damaging the pre-formed shape, which would discourage modifying Kenney to use the blister pack of Tampieri. Further, Tampieri neither teaches nor suggests turning its blister pack upside down, placing the products on a moving flat sheet, and covering them with a synchronized moving pre-shaped sheet.

Tampieri's pre-shaped rigid structure is distinguishable from Applicant's claimed flexible "film." Applicant's specification clearly uses the term "film" to refer to a flexible sheet, which is consistent with the dictionary definition: "3a: an exceedingly thin layer : lamina b (1): a thin flexible transparent sheet (as of plastic) used especially as a wrapping (2): a thin sheet of cellulose acetate or nitrocellulose coated with a radiation-sensitive emulsion for taking photographs" ("film". Merriam-Webster.com. 2011. <http://www.merriam-webster.com>). Accordingly, Applicant submits that the cited art does not satisfy all the claim limitations of independent claims 1, 10, 11, 15, and 26.

Kenney Does Not Disclose An "Array" Or A "Bandolier"

Claims 1, 12, 15, and 26 each are directed to an "array" or a "bandolier". The pending office action considers each bag of Kenny to be a "removable enclosure" and therefore Kenny satisfies the limitation of "an array of removable enclosures" and "separating the products into arrays of multiple, connected products." This Examiner's position is error, as it misreads Kenny, which expressly states that the bags are cut apart just after seaming and then separated and stacked:

After the consolidated two ply web 9 leaves the sealing means 8, it passes to a cutting device 13, which will be described in more detail later. The cutting device 13 cuts substantially circular bags from the web 9 which will however still surround the bags after they leave the cutting device 13. The bags are transported by the web in this manner to a stacking and packing station 14, which will be described in greater detail later in the specification. When the bags have been separated from the web, the waste web material is removed by a suction device 15. (Kenny, col. 6, lines 52 et seq.)

Kenny, as explained more fully below, does not teach an “array”. Nor does Kenny teach “arrays of multiple, connected products” as recited in claim 1, nor “sealed areas between the products are weakened, such that the packaged products can be easily separated,” as recited in claim 12, nor “a bandolier” as recited in claims 15 and 26. It would be contrary to the operation of Kenny to modify it to form these structures. Accordingly, Applicant submits that the cited art does not disclose each limitation of claims 1, 12, 15, and 26.

It Is Impermissible To Modify Kenney As Stated In The Office Action Because It Would Impermissibly Change A Fundamental Principle Of Operation Of Kenney

Kenney is the primary reference for each of the obviousness rejections, therefore the reasoning of this paragraph applies for each claim.

Kenney is directed to an apparatus and method for producing “non-rectangular” tea bags (Kenney, col. 1, line 38 et seq.) that are “a completely new departure from the prior art.” (col. 3, lines 12 – 13). “This is made possible by using the waste web which surrounds the packages to transport the packages to a removal station in a controlled manner. By surrounding the packages, the web controls closely the position of the packages, which means that they may be presented accurately to the removal means.” (col. 3, lines 22 – 27).

Kenney’s detailed description section further explains the importance of the web (that is, the filter paper waste that is cut away from the tea bag product): “After the web 9 has been cut into individual bags, the bags are carried out of the cutting device 13 both by the momentum imparted by the cutting rollers 16, 17 and by the waste web material which still surrounds the bags and is placed in tension by the suction device 15.” (col. 8, lines 13 – 17). Kenney makes it clear that forming its product within a web that is cut away, but that uses the web to carry its products through a stage of its process, is a fundamental principle of its operation.

Modifying Kenney to satisfy the limitations of claim 1 would impermissibly change the object and fundamental principle of Kenney. For example, Kenney could not be modified to achieve “an array of removable enclosures” nor “separating the products into arrays of multiple, connected products.”

Further, Kenney's fundamental principle would have to be impermissibly discarded to satisfy the limitations of, for example:

claim 8: "the packaged products stay attached to each other, but can be easily separated,"

claim 12 : "the sealed areas between the products are weakened, such that the packaged products can be easily separated" and

claims 15 and 26, each of which recite a "bandolier."

Each of the above limitations cannot be met without changing a fundamental principle of operation of Kerrey.

Lemelson Does Not Teach Ultrasonic Welding As Claimed

Claim 1 requires "ultrasonic sealing the first and second sheets together near the outer edges of the individual products or grouped products by a sealing device". Claim 7 requires that "ultrasonic sealing step comprises co-operation between an ultrasonic welding device and the sealing ribs" Claim 15 states that the transverse seals are "ultrasonic welded".

The pending office action states that Lemelson discloses that packages are "welded . . . by heat or ultrasonic welding." The office action in paragraph 10 states that Lemelson discloses individual packages that are welded laterally and longitudinally, citing column 4, lines 45 – 52:

In a preferred form of the apparatus of FIG. 3, the rolls 39 and 45 are shaped with a plurality of land-like raised portions 41 surrounding cavities 40 in the surface of the roll or drum, said land portions being operative to cooperate with similar land portions in the opposite drum to compress the flat tubular formation 32" together and weld same as the result of heating the drums and/or by radio frequency energy *applied to the drum land-like formations which serve as electronic heat-sealing dies.*" (Lemelson, col. 4, lines 43 – 52) (emphasis added).

It is error to read Lemelson to encompass ultrasonic welding, which has a well-defined meaning in the art. In contrast to ultrasonic heating, Lemelson discloses radio frequency heating of the drum, which then heat seals material. In this regard, Lemelson's reference to the radio frequency encompasses a large range of wavelengths that (according to some definitions)

encompass typical ultrasonic welding frequencies near the range's lower limit. The radio frequency range also encompasses microwave frequencies, which are well known for heating. But the fairest reading of Lemelson is that it teaches radio frequency radiation to heat the drum, which then heat welds the plastic:

During the interview, the breadth of the term "ultrasonic welding" was discussed. Applicant submits that the well-established definition of ultrasonic welding precludes encompassing indirect heating of a tool for conventional heat welding, as taught by Lemelson.

The *Injection Molding Handbook* (D.V. Rosato et al., Kluwer Academic Publishers, 2000) explains regarding ultrasonic welding that "[w]elding occurs when high-frequency (20 to 40 khz) vibrational energy is directed to the interface between two parts, creating localized molecular expansion, which causes the plastic to melt." (*Id.*, at 950-951). Also, under "Thermal Bonding", Ultrasonics", the *Injection Molding Handbook* states that "[h]igh-frequency sound vibrations transmitted by a metal horn generate friction at the bond area of a thermoplastic part, melting plastics just enough to permit a bond." (*Id.*, at 942).

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CONCLUSION

Applicant preserves all prior arguments and does not acquiesce to the findings in the pending rejection. Based on the foregoing, Applicant submits that the claims recite patentable subject matter.

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